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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/292,152	04/15/1999	MICHAEL A. FISCHER	00232/194001	3148

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MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

NGUYEN, DINH Q

ART UNIT PAPER NUMBER

3752

DATE MAILED: 02/09/2004

28

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/292,152

Applicant(s)

FISCHER, MICHAEL A.

Examiner

Dinh Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-104 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 21-35 is/are rejected.
- 7) ☒ Claim(s) 2-20 and 36-104 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 21-35 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Inasmuch as none of these claims require a deflector having at least two reentrant slots; i.e., structure which one of ordinary skill in the art would clearly understand from the description to be essential or critical to the operation of the claimed sprinkler. All of applicant illustrated and described include a "deflector defining at least two reentrant slots disposed in opposition about a deflector axis" (page 8, lines 22-24). Furthermore, applicant has compared his sprinkler having a reentrant-slotted deflector with those having "the conventional straight-slotted deflector" (page 24, line 19) on page 16, 24, and 25. One of ordinary skill in the art would have clearly understood from these descriptions and comparisons that the reentrant slots were not only important, but were essential to applicant's "early suppression" sprinkler. Furthermore, a deflector without reentrant slots would deflect fluid away from the areas right underneath the sprinkler.

In the instant case, applicant states throughout the specification that his deflector has at least two reentrant slots and that "With this arrangement, there is diverted a quantity of fire retardant fluid sufficient to produce the required amount of thrust in the inner, downwardly-directed portion of the spray pattern at pressures lower than those produced

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by either straight slots or slots that taper to become slightly wider in the radially outward direction.” (page 8, line 3-9). Applicant specified that there may be “variations in the shape and dimensions of the reentrant slots” (page 26, line 3-4), but has described no deflector with reentrant slots which will function in the manner as claimed. Accordingly, the aforementioned claims are clearly rejectable as being broader than the supporting disclosure.

Gentry Gallery Inc. v. Berline Corp., 45 USPQ 2d 1498, 1503 (CAFC 1998).

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 21-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitations of the instant claims are of operating parameters (i.e., NFPA, storage height, ceiling height, K factor) and not of the features that make up the apparatus such as the deflector with reentrant slots.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Meyer et al. (U.S. Patent No. 5,829,532).

Meyer et al. discloses an early response sprinkler suitable for use in accordance with NFPA 13 and NFPA 231 (column 1, lines 30-48) to protect rack storage with height of 25

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feet and ceiling of 30 feet (column 8, lines 23-26) having a sprinkler body 12 with an orifice 14b, a K factor of 25 and pressure of 15 pound per square inch (column 8, lines 1-2).

Response to Arguments

7. Applicant's arguments filed November 24, 2003 in the Preliminary Amendment have been fully considered but they are not persuasive. Applicant fails to overcome the rejections of 35 U.S.C. 112, 1st and 2nd as indicated above. Applicant has not provided the structural limitations required to achieve the claimed invention of an early suppression fast response (ESFR) sprinkler with a K factor of 25 and liquid pressure of at least 15 psi, the structural make up of the sprinkler required to achieve the specified K factor and pressure is of an importance feature to differentiate applicant claimed invention with other existing sprinklers such as the Ponte's sprinkler (U.S. Patent No. 5,915,479), which is also disclosed sprinkler operating at K factor of 25 (column 4, lines 8-10). The special reentrant slots of the instant application is critical in helping to enhance the Actual delivered Density (ADD), which is one of the three important factors for an early suppression performance.

Allowable Subject Matter

8. Claims 2-20 and 36-104 are allowed.

Conclusion

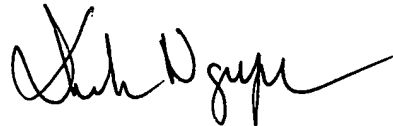
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,505,643 to Meyer et al is cited to disclose an early response sprinkler with K factor of 25 or higher.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dinh Q Nguyen whose telephone number is (703) 305-0248. The examiner can normally be reached on Monday-Friday 6:30-4:00 alternate Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dinh Q Nguyen
Patent Examiner
Art Unit 3752

dqn